



# Ocular Immunology and Inflammation

ISSN: (Print) (Online) Journal homepage: <https://www.tandfonline.com/loi/oi20>

## Recurrences of Scleritis after Ocular Surgery

D.P.C. Vergouwen , J.C. Ten Berge & A. Rothova

To cite this article: D.P.C. Vergouwen , J.C. Ten Berge & A. Rothova (2021):  
Recurrences of Scleritis after Ocular Surgery, Ocular Immunology and Inflammation, DOI:  
[10.1080/09273948.2020.1855357](https://doi.org/10.1080/09273948.2020.1855357)

To link to this article: <https://doi.org/10.1080/09273948.2020.1855357>



© 2020 The Author(s). Published with  
license by Taylor & Francis Group, LLC.



Published online: 05 Feb 2021.



Submit your article to this journal [↗](#)



Article views: 134



View related articles [↗](#)



View Crossmark data [↗](#)

## Recurrences of Scleritis after Ocular Surgery

D.P.C. Vergouwen, MD<sup>a,b</sup>, J.C. Ten Berge, MD PhD<sup>a</sup>, and A. Rothova, MD PhD<sup>a</sup>

<sup>a</sup>Departments of Ophthalmology, Erasmus MC, University Medical Centre Rotterdam, Rotterdam, The Netherlands; <sup>b</sup>Immunology, Erasmus MC, University Medical Centre Rotterdam, Rotterdam, The Netherlands

Editor,

In the May 2020 issue of *Ocular Immunology and Inflammation*, an interesting study by Palkar et al. entitled 'Cataract surgery in the setting of scleritis' was published, which reported on surgical management of patients with previous scleritis.<sup>1</sup> The authors concluded that control of inflammation activity prior to cataract surgery was essential for successful outcome.<sup>1</sup> Though surgery is commonly needed for the complications of scleritis such as cataract and glaucoma, the publications on this topic are scarce.<sup>2</sup>

It is known that ocular surgery in patients with (prior) scleritis can lead to severe complications and permanent visual loss.<sup>3</sup> Previously recognized risk factors for recurrence of scleritis after ocular surgery included the presence of systemic immune-mediated diseases, a short time of remission before surgery, multiple surgeries, and use of corneoscleral incision in cataract surgery.<sup>3–5</sup>

This has led to the recommendation of diverse expert opinion-based preventive measures for intraocular surgery in scleritis patients; however, clear guidelines are lacking.<sup>6</sup> In this study, we confirm the main conclusions of the study of Palkar et al. and wish to add novel data on recurrences of scleritis after cataract as well as glaucoma surgery in patients with previous non-infectious scleritis from our institution.

We conducted a retrospective cohort study, wherein we reviewed 103 patients with scleritis from the Erasmus Medical Center (Rotterdam, The Netherlands). We included all 16 patients with noninfectious scleritis, who had undergone ocular surgery after the onset of their scleritis, between 2005 and 2019. An additional 10 patients developed scleritis de novo after surgery but were not included in our present series. This study has followed the Tenets of the Declaration of Helsinki and was performed with the permission of the local Medical Ethics Committee.

We registered baseline characteristics, time in remission before surgery, type of surgery, ongoing systemic treatment, and use of additional perioperative systemic corticosteroids. The main outcome was recurrence of scleritis within 3 months after surgery. Continuous data were reported as median and range, and categorical data as number and percentage. Mann–Whitney *U*-test and Fisher's exact test were used to analyze results, while a *p* value less than 0.05 was considered significant.

The included 16 patients had undergone a total of 24 ocular surgeries (Table 1). The median age at onset of scleritis was 60 years (range 45–81) and 9/16 patients (56%) were male. Bilateral disease occurred in 10/16 patients (63%), 5/16 (31%) had anterior scleritis, and 4/16 (25%) had scleral necrosis. Systemic immune-mediated diseases were diagnosed in 10/16 (63%) patients, whereof 30% had granulomatosis with polyangiitis, 20% rheumatoid arthritis, and 50% other disorders. A biological agent was required in 8/16 (50%), mainly rituximab (6 patients; 2 had adalimumab and one tocilizumab). Average follow-up was 75 months (range 11–181).

Recurrence of scleritis within 3 months after surgery occurred in 4/24 surgeries (4/24; 17% of surgeries; 4/16; 25% of patients; Table 1). All four patients with recurrences had a systemic disease and were younger than the patients without the remissions. In surgeries followed by recurrences, the time of inactive scleritis prior to surgery was shorter (all shorter than 6 months; Table 1). A corneoscleral incision was used in all three cataract extractions followed by recurrences. Use of ongoing systemic treatment and administration of perioperative systemic corticosteroids did not differ between patients with and without recurrences.

Surprisingly, recommended preventive measures were not used in a large percentage of patients with previous scleritis. This is in accordance with the article of Palkar et al., and this phenomenon might reflect a lack of clear guidelines or a lack of knowledge of importance of these precautions. Our study is limited by a small number of patients, its retrospective character, and probable bias toward severe scleritis in a tertiary center. A more extended study would be required for the evaluation of specific preventive measures.

In conclusion, we confirm that ocular surgery can be performed reasonably safely in patients with prior scleritis, and point out that the duration of remission before surgery is crucial. Our limited data show that a period of several months of inactive scleritis before surgery is desirable.

### Declaration of Interest

The authors report no conflicts of interest. The authors alone are responsible for the content and writing of the paper.

**Table 1.** Characteristics and recurrences of scleritis after intraocular surgery in patients with prior noninfectious scleritis.

	Total N = 24	No recurrence of scleritis after surgery N = 20	Recurrence of scleritis after surgery N = 4 <sup>a,b</sup>	p Value
Type of ocular surgery: cataract extraction	18/24 (75%) <sup>c</sup>	15/20 (75%)	3/4 (75%)	-
Average time in remission before surgery in months (range)	14.4 (0–86)	17.0 (0–86)	2.2 (1–5)	0.02
Time in remission before surgery for at least 6 months	9/23 (39%)	9/19 (47%)	0/4 (0%)	0.13
Ongoing systemic immunosuppressive treatment	18/24 (75%)	14/20 (70%)	4/4 (100%)	0.54
Addition of perioperative systemic corticosteroids	15/24 (63%)	12/20 (60%)	3/4 (75%)	1.00
Corneal incision	7/15 <sup>d</sup> (47%)	7/12 (58%)	0/3 (0%)	0.20

<sup>a</sup>Four surgeries involved four patients.<sup>b</sup>Two additional patients had temporary post-surgical macular edema, but their scleritis remained quiet.<sup>c</sup>The remaining surgeries included two pterygium excisions, two vitrectomies, one trabeculectomy, and one Ahmed implant. Recurrence occurred after the Ahmed implant.<sup>d</sup>In cases with cataract extraction; details about the incision were unknown in three cases.

## Funding

This work was supported by the Stichting Lijf en Leven [L&L/mon/19-007].

## References

1. Palkar A, Sudharshan S, George AE, Ganesh SK, Biswas J, Dutta Majumder P. Cataract surgery in the setting of scleritis. *Ocul Immunol Inflamm.* 2020;1–4. doi:10.1080/09273948.2020.1754434.
2. Yang P, Ye Z, Tang J, et al. Clinical features and complications of scleritis in Chinese patients. *Ocul Immunol Inflamm.* 2018;26(3):387–396. doi:10.1080/09273948.2016.1241282.
3. Perez VL, Azar DT, Foster CS. Sterile corneal melting and necrotizing scleritis after cataract surgery in patients with rheumatoid arthritis and collagen vascular disease Review. *Semin Ophthalmol.* 2002;17(3–4):124–130. doi:10.1076/soph.17.3.124.14786.
4. Das S, Saurabh K, Biswas J. Postoperative necrotizing scleritis: A report of four cases. *Middle East Afr J Ophthalmol.* 2014;21(4):350–353. doi:10.4103/0974-9233.142277.
5. O'Donoghue E, Lightman S, Tuft S, Watson P. Surgically induced necrotizing sclerokeratitis (SINS) - Precipitating factors and response to treatment. *Br J Ophthalmol.* 1992;76(1):17–21. doi:10.1136/bjo.76.1.17.
6. Huang J, Gaudio PA. *Episcleritis, Scleritis, and Keratitis. Ocular Inflammatory Disease and Uveitis Manual: Diagnosis and Treatment.* 272. Philadelphia (PA): Lippincott Williams and Wilkins; 2012.